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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,562	04/27/2006	Seok-Hyun Yun	036179US247538700030	3634
30873	7590	10/15/2009		
DORSEY & WHITNEY LLP			EXAMINER	
INTELLECTUAL PROPERTY DEPARTMENT			LYONS, MICHAEL A	
250 PARK AVENUE			ART UNIT	PAPER NUMBER
NEW YORK, NY 10177			2877	
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			10/15/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/577,562	Applicant(s) YUN ET AL.
	Examiner MICHAEL A. LYONS	Art Unit 2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 16 September 2009.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-62, 64-93 and 96-112 is/are pending in the application.
 4a) Of the above claim(s) 81-93 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-62, 64-80, and 96-112 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 27 April 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 072709 and 091609.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Election/Restrictions

This application contains claims 81-93 drawn to an invention nonelected with traverse in the reply filed on April 9, 2008. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Information Disclosure Statement

The examiner notes the consideration of a pair of information disclosure statements (IDS) filed July 27, 2009 and September 16, 2009. Any citation crossed out on the July 27, 2009 IDS has been crossed out due to being improperly cited; PGPUB citations are missing digits, and NPL citations are incomplete. Additionally, any citation cited in the IDS of September 16, 2009 that was already cited in the IDS of July 27, 2009 has been crossed out as being an unnecessary duplicate. Any citations unique to the IDS of September 16, 2009 that have been crossed out are crossed out for the same reasons as those citations crossed out in the IDS of July 27, 2009.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-62, 64-80, and 96-112 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding the above claims, the claims consistently recite "at least one" first, second, third, et al. arrangement, electromagnetic radiation, dual balanced receiver, polarization diverse receiver, and so on. However, examiner only finds enablement in the specification for one of each first, second, third, et al. arrangement, one electromagnetic radiation, one dual balanced receiver, one polarization diverse receiver, and on as in each individual embodiment as set forth in the specification. There can be no enablement of an apparatus containing more than one arrangement configured to do a thing if the specification only sets forth one arrangement configured to do said thing in each the embodiments set forth therein. Enablement exists for one arrangement, one receiver, and so on, but not "at least one".

Allowable Subject Matter

Claims 1-62, 64-80, and 96-112 may be allowable in view of the prior art of record if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter:

As to claims 1, 20, 21, 45, 46, 69, 71, 79, and 80, the prior art of record, taken either alone or in combination, fails to disclose or render obvious the claimed apparatus and methods specifically for the reasons set forth in applicants' arguments dated February 4, 2009 in response to the previous Office action of record, and in combination with the rest of the limitations of the above claims.

Response to Arguments

Applicants' arguments filed July 27, 2009 have been fully considered but they are not persuasive.

Applicants argue that the enablement rejection under 35 USC 112, 1st paragraph is improper because the application discloses the invention as claimed. Applicants cite at least paragraphs 0019-0026 and 0182 of the corresponding US PGPUB 2006/0244973 to the instant application as evidence to support the claim.

While the examiner agrees that the specification discloses in these citations, the examiner disagrees that what is set forth in these citations is enough to enable the instant claims. As set forth in MPEP 2161, the specification must include “the manner and process of making and using the invention (the enablement requirement)”. While the specification includes the manner and process of making and using the invention that sets forth one first arrangement and one second arrangement, as set forth in instant claim 1, the specification fails to set forth the manner and process of making and using the invention that sets forth *at least one* first arrangement and *at least one* second arrangement (emphasis added), with “at least one”, in its broadest reasonable interpretation, being construed to mean “one or more”.

If the claims are indeed enabled by the specification, the examiner respectfully requests that applicants expressly point out in the specification support for “at least one first arrangement”, “at least one second arrangement”, and so on. The examiner notes that pointing out passages from the “summary of the invention” portion of the specification, as cited in paragraphs 0019-0026 in applicants’ arguments, is insufficient as support. The “summary of the invention” portion of the specification is merely a summary of the claims as originally filed, and it includes nothing that teaches one of ordinary skill in the art how to make and use the claimed invention using more than one first arrangement and more than one second arrangement, for example.

Likewise, the section of the specification set forth in paragraph 0182 as cited in applicants' arguments serves as final summary of the invention; no teaching of one having ordinary skill in the art how to make and use the claimed invention using more than one first arrangement and more than one second arrangement, for example, is disclosed in this passage. Accordingly, in light of the above, the claims remain rejected as lacking enablement under 35 USC 112, 1st paragraph.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL A. LYONS whose telephone number is (571)272-2420. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael A. Lyons/
Primary Examiner, Art Unit 2877
October 9, 2009